Fritz-Haber-Institut der Max-Planck-Gesellschaft, Humboldt-Universität zu Berlin, Max-Delbrück-Centrum für Molekulare Medizin, Otto-von-Guericke-Universität Magdeburg, Physikalisch-Technische Bundesanstalt, Technische Universität Berlin, Universität Potsdam

Berlin Center for Studies of Complex Chemical Systems

Seminar

Complex Nonlinear Processes in Chemistry and Biology

Honorary Chairman: G. Ertl
Organizers: M. Bär, C. Beta, H. Engel, M. Falcke, M. J. B. Hauser, J. Kurths, A. S. Mikhailov, P. Plath, L. Schimansky-Geier, and H. Stark

Friday, April 17, 2015, at 16:00
Address: Richard-Willstätter-Haus, Faradayweg 10, 14195 Berlin, U-Bahnhof Thielplatz (U3)

Prof. Ramon Reigada
Department of Physical Chemistry, University of Barcelona

Organization of multicomponent lipid bilayers:

The effect of chloroform

The interaction of the two leaflets of the plasmatic cell membrane is believed to play an important role in many cell processes. Experimental and computational studies have explored the mechanisms modulating the interaction between two membrane leaflets. Here, by means of coarse-grained molecular dynamics simulations, we show that the addition of a small and polar compound such as chloroform alters interleaflet coupling by promoting transverse domain correlations. This is interpreted in terms of an entropic gain that favours frequent chloroform commuting between the two leaflets. The implications of this effect for general anaesthetic action are discussed.

Information: Dr. Steffen Martens, Tel. (030) 314 23001, email: steffen.martens@tu-berlin.de